CLAIMS

1. An ultrasonic diagnostic apparatus for delay-controlling the ultrasonic wave beams of a plurality of ultrasonic transducer elements linearly arranged in a horizontal direction to a specimen, characterized by:

means for deriving the distance from each of said plurality of ultrasonic transducer elements to said convergence positions with from a hyperbolic function wherein the gradient "a" of an asymptote is $0 < |a| < 1$, with the positions in a horizontal direction of said plurality of ultrasonic transducer elements as the variable; and

means for generating the driving pulse of each of said plurality of ultrasonic transducer elements delayed in accordance to said derived distances.

2. An ultrasonic diagnostic apparatus for delay-controlling the ultrasonic wave beams of a plurality of ultrasonic transducer elements arranged on a convex surface in a horizontal direction to a specimen, characterized by:

means for deriving the distance from each of said plurality of ultrasonic transducer elements to said convergence positions from the sum of a hyperbolic function wherein the gradient "a" of an asymptote is $0 < |a| < 1$, with the positions in a horizontal direction of said plurality of ultrasonic transducer elements as the variable, and the distance from each of said ultrasonic transducer elements and a reference line to which

the ultrasonic transducer element in the center contacts on the convex surface; and

means for generating the driving pulse of each of the said plurality of ultrasonic transducer elements delayed in accordance to said derived distances.